

ABSTRACT

An automotive steering device (1) includes an electric motor (12) which generates a steering assist force. The electric motor (12) includes a stator (22) surrounding a rotation shaft (13), and first and second rotors (18, 19) rotatable together with the rotation shaft (13). The stator (22) includes a plurality of cores (25A-25D) elongated parallel to an axis of the rotation shaft (13). An electric current is caused to flow through coils (26A-26D) wound around the respective cores (25A-25D), whereby the cores (25A-25D) are each formed with first and second magnetic poles (27A-27D, 28A-28D) having opposite polarities. The first and second magnetic poles (27A-27D, 28A-28D) are disposed longitudinally (L) opposite to each other with respect to the corresponding cores (25A-25D). As the rotation shaft (13) is rotated, a third magnetic pole (20n) of the first rotor (18) and a fourth magnetic pole (21s) of the second rotor (19) are respectively brought into opposed relation to the first and second magnetic poles (27A-27D, 28A-28D) of the cores (25A-25D) in the same phase. Magnetic fluxes (J) interlink with the coils (26A-26D) around the cores (25A-25D) in predetermined directions longitudinally (L) of the cores (25A-25D).